PROJECT MERCURY

ASTRONAUT TRAINING PROGRAM

1. EDUCATION IN ASTRONAUTICS AND SPACE BIOLOGY
2. PARTICIPATION IN MERCURY DEVELOPMENT PLAN
3. CONDITIONING FOR SPACE FLIGHT
4. TRAINING IN OPERATION OF MERCURY VEHICLE
5. FAMILIARIZATION WITH GROUND OPERATIONS
6. AVIATION FLIGHT TRAINING

NASA

Note

INTENSIVE EXAMINATIONS

PHASE	TITLE	OBJECTIVE	TECHNIQUES	WHERE PERFORMED	TIME, DAYS
1	CLINICAL EVALUATION	DETECT DEFECTS PHYSIOLOGICAL BASE LINES FORENSIC	CLINICAL LABORATORY CONTINUING BASE LINES PERSONALITY AND APTITUDE TESTS	WRAMC NNMC NIH ANDREWS AFB HOSP.	4
2	LANGLEY TECHNICAL AND PSYCHOLOGICAL TESTING.	ORIENT TO PROGRAM TECHNICAL CONTACTS PSYCHOLOGICAL STRESSES SOCIAL EFFECTIVENESS	TEST FLIGHTS PSYCHOMOTOR TESTS {LECTURES, FIELD TRIPS {WRITTEN AND ORAL TESTS EXTEMPORANEOUS SPEECHES ROLE PLAYING ISOLATION	LANGLEY RESEARCH CENTER	9
3	HUMAN STRESS TESTS	REDUCED SIMULATION OF MISSION ADAPTATION	CENTRIFUGE ALTITUDE CHAMBER HEAT CHAMBER OTHER	AMAL AND ACEL WADC NAMC (PENSACOLA)	4

L-662

DETAILS OF CLINICAL EVALUATION

PSYCHIATRY

OPHTHALMOLOGY

OTOLARYINGOLOGY

CARDIOLOGY

GASTROENTEROLOGY

UROLOGY

GENERAL MEDICINE

RADIOLOGY

PATHOLOGY

NEUROLOGY

ANTHROPOLOGY

DETAILS OF LANGLEY FIELD EVALUATIONS

I. ACADEMIC PROGRAM

- LECTURES
- TOURS
- WRITTEN EXAMINATIONS
- OBSERVATIONAL TESTS

II. SOCIAL "STRESS" TESTS

- ORAL EXAMINATIONS
- EXTEMPORANEOUS SPEECHES
- MOCK PRESS INTERVIEWS
- ASSIGNMENT TO SPACE TASK GROUP DEPARTMENT
- SPACE TASK GROUP PARTY

III. FLIGHT TESTS

- WEIGHTLESS FLIGHT
- CHECK FLIGHT

IV. PSYCHOMOTOR TESTS

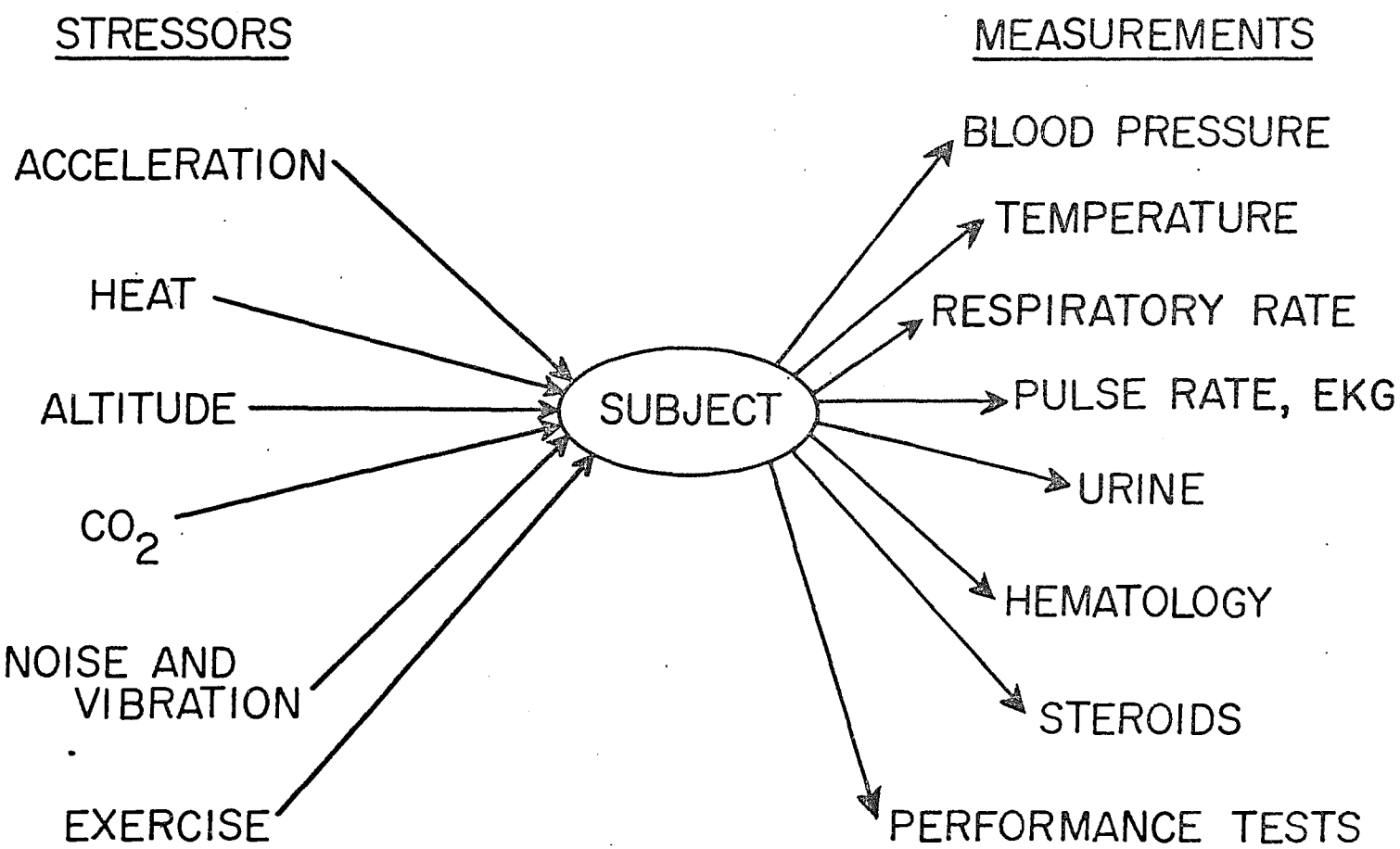
- REACTION CONTROLS TRAINER
- DYNAMIC SIMULATORS

V. ISOLATION

- CONFINEMENT IN SIMULATED CAPSULE

L-659

DETAILS OF HUMAN STRESS TESTS



L-661

TRAINING PROGRAM

I–APPROACH
- A-GRADUAL BUILD UP
- B-SECONDARY SELECTION
- C-CONTRIBUTION TO R–AND–D EFFORT

II–AREA OF TRAINING
- A-PHYSIOLOGICAL
- B-ACADEMIC
  1. BASIC SCIENCE
  2. VEHICLE AND OPERATIONAL PROBLEMS
- C-GROUND SIMULATOR TRAINING
- D-FLIGHT TRAINING

III–TRAINING STAGES	STARTING DATE
A-BASIC GROUND TRAINING	4/1/59
B-ADVANCED GROUND TRAINING	5/15/59
C-PRIMARY FLIGHT TRAINING	10/1/59
D-ADVANCED FLIGHT TRAINING	1/1/60

BASIC GROUND TRAINING

I - PHYSIOLOGICAL

- A - ACADEMIC
- B - PHYSICAL CONDITIONING
- C - BASIC PHYSIOLOGICAL STUDIES
- D - BASIC ALTITUDE TRAINING AND PRESSURE SUIT FITTING

II - ACADEMIC PROGRAM (BASIC SCIENCES):

- ASTRONOMY
- METEOROLOGY
- AERODYNAMICS
- ETC.

ADVANCED GROUND TRAINING

I - PHYSIOLOGICAL

- A - GROUND SIMULATION OF MISSION
  - 1. STATIC SIMULATION AT LANGLEY
  - 2. DYNAMIC SIMULATION AT AMAL
- B - IMPACT TESTS

II - OPERATIONAL TRAINING

- A - ACADEMIC PROGRAM
- B - GROUND SIMULATORS
  - 1. NAVIGATIONAL TRAINERS
  - 2. REACTION CONTROLS TRAINER
  - 3. DYNAMIC SIMULATION AT AMAL
- C - AIRBORNE TESTS
  - 1. WEIGHTLESSNESS
  - 2. BREAK-OFF PHENOMENA

FLIGHT TRAINING
TENTATIVE

PRIMARY

I. DROP TESTS

DROP FROM C-130 AT 40,000 FT

II. ESCAPE SYSTEM FLIGHTS

LAUNCH FROM PAD

III. BALLOON FLIGHTS

24 HRS AT 80,000 FT DROP FROM 80,000 FT

ADVANCED

I. SUB-ORBITAL FLIGHTS

L-666

SUPPORTING RESEARCH

I. RESEARCH ADMINISTRATION

- A. APPLIED RESEARCH
  - 1. SPACE TASK GROUP
  - 2. SUBCONTRACTOR
- B. BASIC RESEARCH
  STG WILL:
  - 1. MAKE RECOMMENDATIONS FOR SUPPORT
  - 2. OFFER SPACE ON A NON-INTERFERENCE BASIS

II. TYPES OF PROJECTS PROPOSED

- A. ENVIRONMENTAL MEASUREMENTS
- B. SIMULATION OF STRESSES
- C. IN-FLIGHT RESEARCH
- D. EQUIPMENT EVALUATION

III. AREAS OF RESEARCH

- A. ACCELERATION
- B. NOISE AND VIBRATION
- C. TEMPERATURE
- D. WEIGHTLESSNESS
- E. NAVIGATION AND ORIENTATION
- F. RADIATION

L-667